ABSTRACT

A system for performing echo cancellation via use of a transceiver interface circuit. In a simplified embodiment, a digital signal processor (DSP), an analog front end (AFE), a line driver, and a hybrid network are located within the circuit. The DSP is configured to process a transmit, receive, and a transmit error signal. Mathematical operations of the DSP eliminate error from the receive signal with the help of the transmit error signal. The AFE modifies the transmit, receive, and transmit error signal from analog to digital or vice-versa. The line driver amplifies the transmit signal to a power level compatible with a transmission network. The line driver further produces the transmit error signal which is created by the amplification of the transmit signal. The hybrid network receives the amplified transmit signal from the AFE and a receive signal from the transmission network, and isolates the transmit signal from the receive signal. The receive signal, which has become infected with error from the hybrid network is passed, via the AFE, to the DSP for error compensation.